CLAIMS

What is claimed is:

1. A process for manufacturing crystalline layered sodium disilicate comprising the steps of a) preparing granules with the addition of water as binder to anhydrous sodium silicate cullet powder; and b) drying and crystallizing the granules by calcination to prepare sodium disilicate, wherein 3-5wt% of final product, sodium disilicate, is recycled to the prior crystallization step.

2. The process for manufacturing crystalline layered sodium disilicate according to claim 1, wherein the water as said binder component is added to the anhydrous sodium silicate cullet powder in the range of 5-30 wt%.

3. The process for manufacturing crystalline layered sodium disilicate according to claim 1, wherein the crystallization step is performed at 650-800℃.

4. A process for manufacturing crystalline layered sodium disilicate comprising the steps of a) preparing granules with the addition of an aqueous solution of sodium silicate as binder to anhydrous sodium silicate cullet powder; and b) drying and crystallizing the granules by calcination to prepare sodium disilicate, wherein 3-5wt% of final product, sodium disilicate, is recycled to the prior crystallization step.

5. The process for manufacturing crystalline layered sodium disilicate according to claim 4, wherein an aqueous solution of sodium silicate as said binder component, having a (molar ratio of SiO_2/ Na_2O in the range of 2.0-3.3, solid content of 15-40 wt%), is added to the anhydrous sodium silicate cullet powder in the range of 10-30

wt%

6. The process for manufacturing crystalline layered sodium disilicate according to claim 4, wherein the crystallization step is performed at 650-800℃.